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KENRICH *et al.*
Appl. No. 10/815,229

## *Amendments to the Claims*

The listing of claims will replace all prior versions, and listings of claims in the application.

1.  (Currently Amended) A method of providing automated document retention for an electronic document comprising:

    ~~(a)~~ assigning a document retention policy to the electronic document, the document retention policy being derived from a ~~periodic installment~~ recurring cut-off retention schedule specifying ~~respective installment~~ cut-off periods, each ~~of the respective installment periods~~ cut-off period having a respective finite document retention duration associated therewith; and

    ~~(b)~~ ~~cryptographically associating~~ encrypting the electronic document based on the document retention policy ~~with the electronic document~~ such that the electronic document can be cryptographically accessed only during finite retention durations.

2.  (Currently Amended) The method as recited in claim 1, ~~further comprising:~~

    ~~(c)~~ ~~cryptographically preventing access to the electronic document in accordance with the document retention policy when the respective document retention duration for the electronic document has been exceeded~~ wherein the encrypting the electronic document comprises encrypting using cryptographic keys associated with particular cut-off periods and associated retention durations.

3.  (Currently Amended) The method as recited in claim 1, wherein [[:]]

    ~~step (b) utilizes a cryptographic key to associate the document retention policy, and~~

    ~~the document retention policy specifies the respective document retention duration and the respective installment period~~ encrypting the electronic document

comprises encrypting using a cryptographic key associated with each particular cut-off period and its associated retention duration.

4.      (Currently Amended) The method as recited in claim 3, wherein the document retention policy specifies the respective document retention duration that expires a predetermined period of time after a beginning of ~~the~~ its respective ~~installment~~ cut-off period.

5.      (Currently Amended) The method as recited in claim 3, wherein ~~the~~ each respective ~~installment~~ cut-off period corresponds to a maximum off-line period of a client.

6.      (Currently Amended) The method as recited in claim 1, wherein said ~~associating~~ encrypting comprises acquiring a cryptographic key from a server over a network, the cryptographic key being used to ~~associate~~ encrypt the electronic document based on the document retention policy.

7.      (Currently Amended) The method as recited in claim 6, further comprising:

~~(c)~~      deactivating the cryptographic key when the respective document retention duration has expired, thereby preventing further access to the electronic document.

8.      (Currently Amended) The method as recited in claim 7, wherein:

        said ~~associating~~ encrypting ~~operates to utilize~~ uses a cryptographic key to ~~associate~~ encrypt the electronic document based on the document retention policy, and

        the document retention policy specifies ~~the~~ respective document retention ~~duration~~ durations and ~~the respective installment period~~ cut-off periods.

9.      (Currently Amended) The method as recited in claim 8, wherein the document retention policy specifies the respective document retention duration that expires

a predetermined period of time after a beginning of ~~the~~ its respective ~~installment~~ cut-off period.

10.    (Currently Amended) A method of limiting access to an electronic document comprising:

determining whether ~~an installment~~ a cut-off period for a first document retention key has elapsed;

generating a next document retention key to be used to encrypt ~~an~~ the electronic document during a next ~~installment~~ cut-off period, the next document retention key having a finite document retention duration associated therewith; and

notifying a client of the next document retention key, the electronic document being cryptographically accessible only during finite document retention durations using a cryptographic key associated with such durations.

11.    (Currently Amended) The method as recited in claim 10, further comprising:

deactivating ~~the prior document retention key when the prior document retention~~ a cryptographic key ~~is to be deactivated~~ according to a predetermined schedule.

12.    (Currently Amended) The method as recited in claim 11, wherein the document retention duration is a predetermined duration of time following a beginning of the next ~~installment~~ cut-off period.

13.    (Currently Amended) A method for restricting access to an electronic document, said method comprising:

encrypting a data portion of ~~an~~ the electronic document using a document key to produce an encrypted data portion;

using a retention access key to associate a document retention policy with the electronic document;

encrypting the document key using the retention access key to produce an encrypted document key, the retention access key being usable for said encrypting during ~~an installment~~ a cut-off period of a ~~periodic installment~~ recurring cut-off retention schedule, the cut-off period having a finite document retention duration associated therewith;

forming a secured electronic document from at least the encrypted data portion and the encrypted document key; and

storing the secured electronic document, the secured electronic document being cryptographically accessible only during the finite document retention duration.

14.     (Previously Presented) The method as recited in claim 13, wherein the retention access key is a public retention access key.

15.     (Currently Amended) The method as recited in claim 13, wherein the document retention policy specifies ~~a~~ the document retention duration that expires a predetermined period of time after a beginning of ~~the installment~~ its cut-off period.

16.     (Currently Amended) A method for accessing a secured electronic document, the secured electronic document having at least a header portion and a data portion, comprising:

obtaining a retention access key, the retention access key being used to associate a ~~respective~~ finite document retention duration of a document retention policy having a cut-off period associated therewith with the electronic document, the retention access key being usable during the ~~respective~~ document retention

duration following a beginning of a respective installment its respective cut-off period of a periodic installment recurring cut-off retention schedule, the secured electronic document being cryptographically accessible only during the finite document retention duration;

obtaining an encrypted document key from the header portion of the secured electronic document;

decrypting the encrypted document key using the retention access key to produce a document key; and

decrypting an encrypted data portion of the secured electronic document using the document key to produce a data portion.

17.    (Previously Presented) The method as recited in claim 16, wherein the retention access key is identified by an indicator within a header portion of the secured electronic document.

18.    (Previously Presented) The method as recited in claim 16, wherein the retention access key is a private retention access key.

19.    (Currently Amended) The method as recited in claim 16, wherein said obtaining obtains the retention access key being obtained from a server.

20.    (Currently Amended) The method as recited in claim 16, wherein the respective document retention duration is a predetermined period of time following a beginning of the its respective installment cut-off period.

21.    (Currently Amended) A tangible computer readable computer-readable medium including at least having stored thereon, computer program code computer-executable instructions that, for providing document retention for an electronic document, said computer readable medium if executed by a computing device, cause the computing device to perform a method comprising:

~~computer program code for~~ assigning a document retention policy to ~~the~~ an electronic document, the document retention policy being derived from a ~~periodic installment~~ recurring cut-off retention schedule specifying cut-off periods, each cut-off period having a respective finite document retention duration associated therewith; and

~~computer program code for cryptographically associating~~ encrypting the electronic document based on the document retention policy ~~with the electronic document~~ such that the electronic document can be cryptographically accessed only during finite retention durations.

22.    (Currently Amended) The tangible ~~computer readable~~ computer-readable medium as recited in claim 21, wherein ~~said computer-readable medium further comprises:~~

~~computer program code for cryptographically preventing access to the electronic document in accordance with the document retention policy when a document retention duration for the electronic document has been exceeded~~ the encrypting the electric document comprises using cryptographic keys associated with particular cut-off periods and associated retention durations.

23.    (Currently Amended) The tangible ~~computer readable~~ computer-readable medium as recited in claim 21, wherein

~~said computer program code for cryptographically associating operates to utilize a cryptographic key to associate the document retention policy, and~~

~~─────── wherein the document retention policy specifies a respective document retention duration and a respective installment period~~ the encrypting the electric document comprises using a cryptographic key associated with particular cut-off period and its associated retention duration.

24.    (Currently Amended) The tangible ~~computer readable~~ computer-readable medium as recited in claim 23, wherein the document retention policy specifies

the respective document retention duration that expires a predetermined period of time after a beginning of ~~the~~ its respective ~~installment~~ cut-off period.

25. (Currently Amended) A computer-implemented file security system for restricting access to an electronic file, comprising:

a ~~key-store~~ computer-readable storage medium ~~that stores~~ configured to store a plurality of cryptographic key pairs, each of the cryptographic key pairs including a public key and a private key, at least one of the cryptographic key pairs pertaining to a retention policy, the retention policy having ~~a respective~~ finite document retention ~~duration~~ durations ~~and a respective installment,~~ each finite document retention duration having a respective cut off period associated therewith; and

an access ~~manager operatively connected to said key-store, said access manager configured~~ control management module which if executed by a computing device of the computer-implemented file security system, causes the computing device to~~:~~

~~make available~~ provide, for each ~~of the respective installment~~ particular cut-off ~~periods~~ period, a different one of the public keys of the at least one of the cryptographic key pairs, and

~~to~~ determine whether the private key of the at least one of the cryptographic key pairs pertaining to the retention policy is permitted to be provided to a requestor based on whether ~~the~~ its respective document retention duration following a beginning of ~~the~~ its respective ~~installment~~ cut-off period has expired,

wherein the requestor requires the private key of the at least one of the cryptographic key pairs pertaining to the retention policy to access a secured electronic file, and wherein the secured electronic file was previously secured

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using the public key of the at least one of the cryptographic key pairs pertaining to the retention policy, and at the time the electronic file was ~~so~~ secured, the public key was within ~~the~~ its respective ~~installment~~ cut-off period and available for use, the secured electronic document being cryptographically accessible only during the finite retention durations.

26.   (Previously Presented) The method as recited in claim 13, wherein access is restricted to the secured electronic document stored to a remote location.